



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



Fleet and Sustainability Program Large Campus & Innovative Change ISWG Overview

May 19, 2016

Daniel Gore,

Fleet, Sustainability and Innovative
Change Program Supervisor

Nicolas Baker, LEED AP

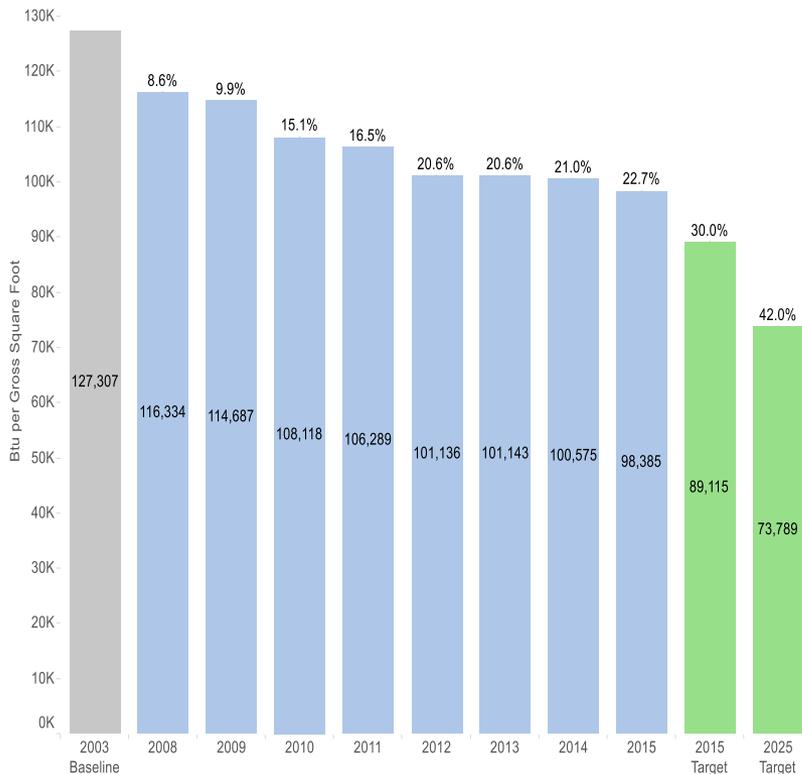
Federal Sustainability, Legislative and
Climate Resiliency/Adaption Lead

FEMP
Federal Energy Management Program

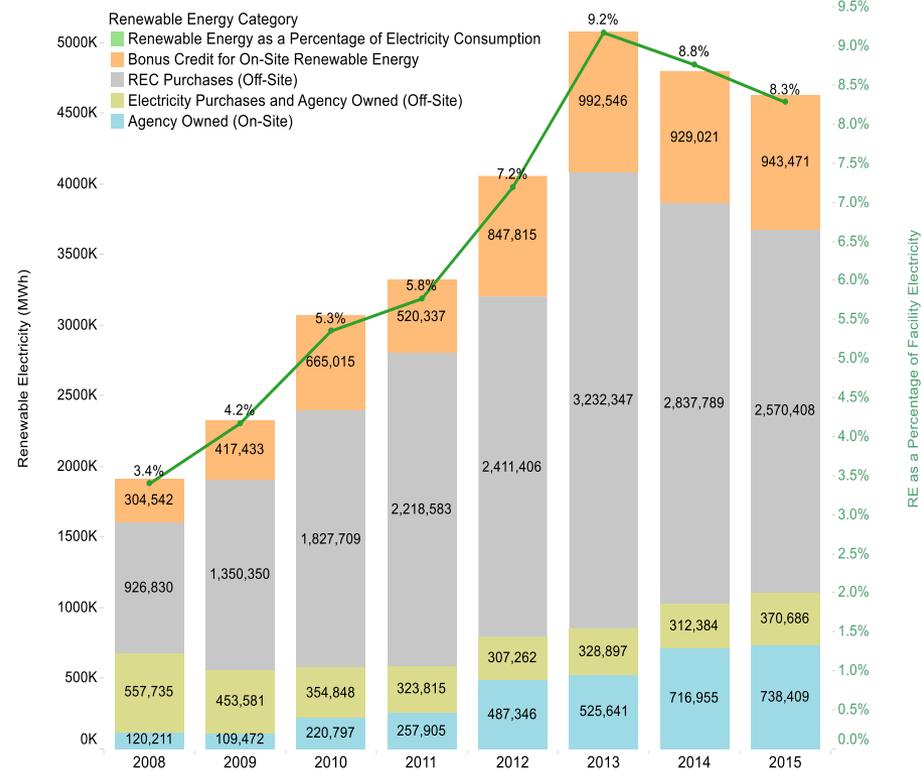
Large Campus and Innovative Change - Problem Statements

Facility Energy - Problem Statement: The Energy Intensity (EI) Reductions and Renewable Electricity Increases have “flat-lined.”

Federal Agency Facility Energy Intensity and Percent Reductions from 2003



Total Government Use of Renewable Energy as a Percentage of Total Electric Energy



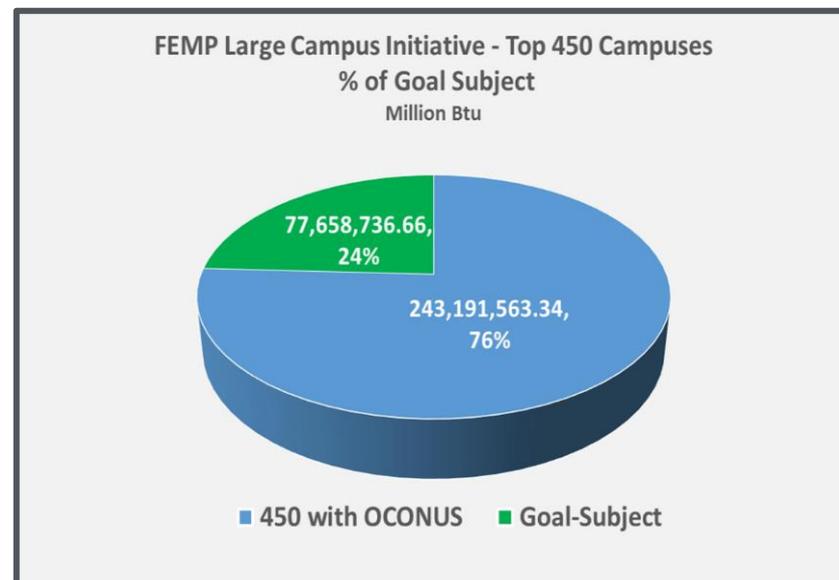
Large Campus and Innovative Change – Mission/Concept

Mission – Seek cost effective methods to resolve problem statements, including:

- New enterprise process changes
- New campus process changes

Concept –

- Identify partner(s)
- Often partners w/campuses
- Jointly envision process change
- Seed fund pilot test
- Hand-off to FEMP program
- Institute behavioral change



Enterprise Process Changes Underway

10 Year PPA with 10 Year Option –

- RE PPAs often don't return investment in less than 10 years; new process identified
- Handed off to RE Procurement Team
- Utilized in aggregated Capital Solar Challenge, FASPP, and individual GSA PJM awards

REopt Feasibility Studies to Actual Project –

- NREL algorithm applied to determine best potential in 400 biggest campuses
- Study to determine best potential in GSA covered facilities; brief to GSA regional personnel
- RE Program and Customer Service doing similar for NASA, Park Service, Commerce
- Obtained CAP funding to perform next step - onsite feasibility; handed off to RE Program
- **FOA Program next step?**
- **Interested?**

Grid Base Green Power -

- GSA/DLA purchased electricity with “new generation” from PJM Grid
- Working Group formed to consider expansion.
- DLA and GSA requesting pilot project plan to purchase for Fed Civilian agencies in PJM
- **Interested?**

Southern Company Collaboration - TBD

Campus Process Changes Underway

VA, Army, Navy, Air Force, DOE, HHS, GSA, NASA have most large campuses

VA ESPC Process Enhancements

- VA awards based on inflexible, staff performed energy assessments (no deviation allowed)
- Piloting concept to improve audits (PNNL) and instill flexibility (@ Two VISN's)
- Prove out improvements and seek to hand off

DOE LANL Smart Labs and Sustainability

- Coordinated LANL meeting with UC Irvine (Lab retrofits achieving 60% plus efficiency gains)
- Assisting with expertise and management skills to upgrade up to eight LANL laboratories.
- Partnering and hand-off to Smart Labs program
- Assisting LANL on sustainability planning

Building Automation System Re-Commissioning

- Tested with PNNL at Joint Base Lewis McChord – 5 to 20 percent energy savings per building
- Base trained and replicating at other buildings.
- Can/should this process be expanded? Could this replace and EISA Audit for one period?

Campus Energy Training at Energy Exchange

- Pre-conference workshop targeting facility managers
- Portfolio and Campus Energy track

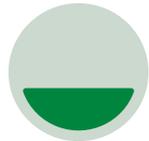
FEMP Large Campus & Innovative Change – FY16+ Timeline

LCIC Initiative Timeline – External Stakeholders

FY15-FY16

FY16-FY18

FY18<



**Phase 1 -
Engagement**

Engage with Federal site identified through various possible inputs

Assess the site through the LCIC screening tools

Outline engagement through an MOA, or other mechanism

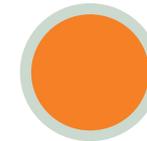


**Phase 2 -
Development**

Engage with 4-10 Federal campuses to test LCIC engagement models and methods

Test and modify replicable LCIC model for Agency Campus engagement

Learn from pilot projects – Collaborating on, Supporting, Observing projects



**Phase 3 -
Deployment**

Conduct outreach and training workshops to train Agency Campus teams on successful models

Continue specific campus engagement on selected sites to update and adapt to new challenges

Collect project data, best practices, lessons learned

FEMP Large Campus & Innovative Change – FY16+ Timeline

What progress has been made and what are the future targets?

Now (FY15-FY16)

Addressing barriers tied to:

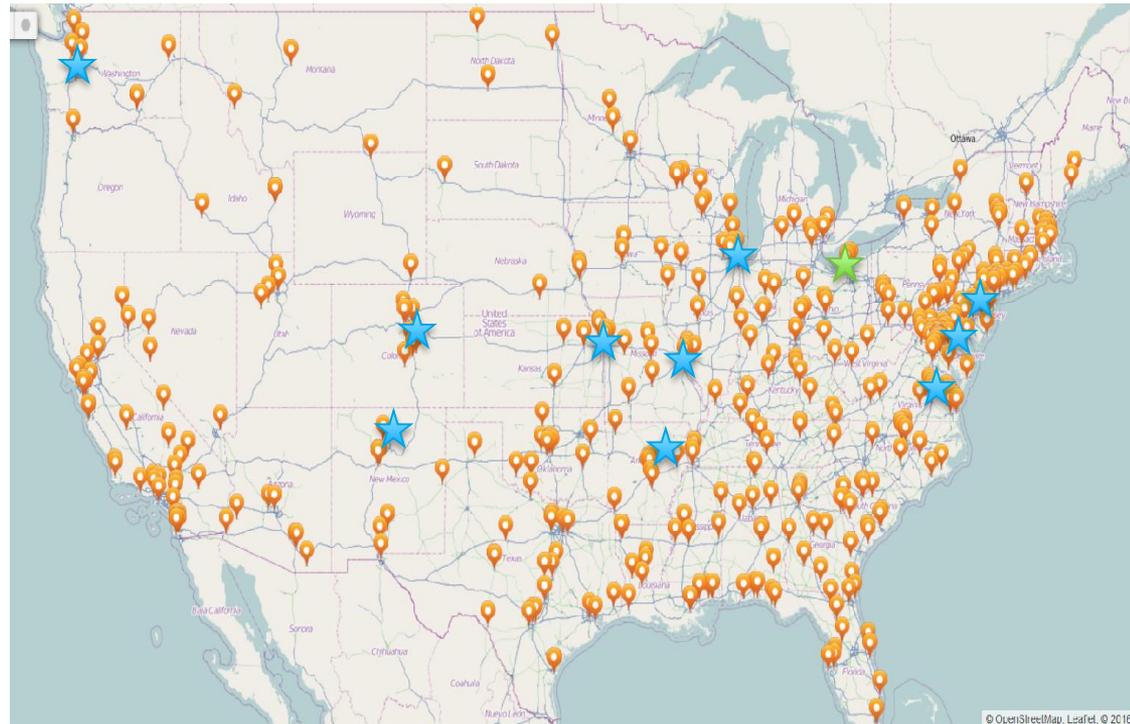
- ESPC processes (VA – Little Rock, Arkansas)
- Re-tuning viability and ECM expansion (Ft Bliss and JBLM)
- Renewable energy deployment (GSA)
- Overall project coordination and strategic energy planning (LANL)

The Future (FY16-FY18)

Additional possible support:

- Campus training at Exchange
- Morph with Inst. Change
- Pilot and hand off more concepts
- Engage DoD
- Make interactive map available
- Targeted technical support
- Training
- On-site demonstrations
- Pilots

LCIC 450 Focus & Active Site Engagements



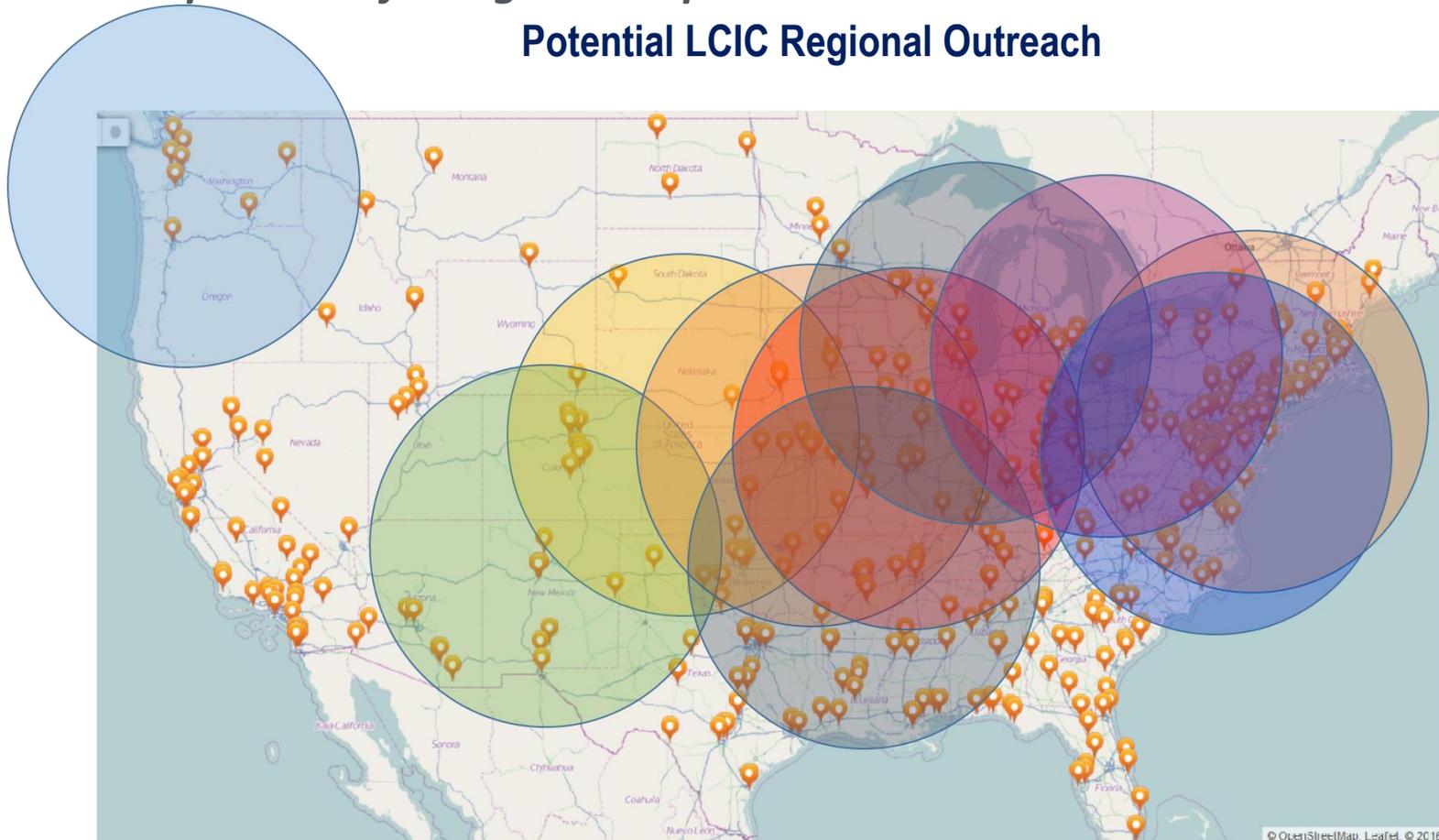
Map 1: The top 450 Federal Campus's in regards to Energy usages, with the active LCIC site engagements starred

FEMP Large Campus Innovative Change – FY16+ Timeline

Future Plans

Where is there the future potential for outreach and training? Every pilot expands the potential for regional impact.

Potential LCIC Regional Outreach



Energy Exchange 2016



Energy Exchange

Federal Sustainability for the Next Decade

U.S. Department of Energy

August 9th-11th, 2016

Rhode Island Convention Center

Providence, RI

Website:

femp.energy.gov/energyexchange

FEMP LCIC Team Contact Information

Daniel Gore

Fleet, Sustainability and
Innovative Change Program
Supervisor
DOE-FEMP
202-586-6477 office
Daniel.Gore@EE.Doe.Gov

Nicolas Baker, LEED AP

Federal Sustainability, Legislative
and Climate Resiliency/Adaption
Lead
DOE-FEMP
202-287-6033 office
Nicolas.Baker@EE.Doe.Gov

Jesse Maestas, CEM

LCIC Project Coordinator
FEMP Contractor
Catalyst Services, LLC
303-396-5819
Jesse.Maestas@VerusRM.com

Jerry Davis

National Renewable Energy Laboratory
303-275-3199
Jerry.Davis@nrel.gov

Kim Fowler, LEED AP

Pacific Northwest National Laboratory
509-372-4233
kim.fowler@pnnl.gov

Elena Meehan

LCIC Concept Developer
FEMP Contractor
Catalyst Services, LLC
865-278-3003
Elena.Meehan@EE.Doe.Gov